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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,413	11/06/2000	Ramkumar Subramanian	E0794	9964

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Himanshu S Amin
Amin Eschweiler & Turocy LLP
24th Floor National City Center
1900 East 9th Street
Cleveland, OH 44114

EXAMINER

CIRIC, LJILJANA V

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 04/02/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,413

Applicant(s)

SUBRAMANIAN ET AL.

Examiner

Ljiljana (Lil) V. Ciric

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003 and 12 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submissions filed on August 29, 2003 and on December 12, 2003 have been entered.

Response to Arguments

2. Applicant's arguments filed on August 29, 2003 and on December 12, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the pressure drop of the valves in the previously applied prior art references is not at least 10 bar, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). For example, in the instant application, since no particular structure is disclosed as being associated with or required for the pressure drop range limitations as recited in the claims of the instant application, one can only assume that any valve in an otherwise comparable system will meet the functional range limitations in the claims.

Also, in response to applicant's arguments that the Nishizawa et al., Kazama et al., and Krueger references fail to show a valve for controlling a flow of *a cooling fluid per se*, the examiner notes not only

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that the cooling fluid is merely recited as part of an intended use recitation [see above], but also notes that, as stated in the MPEP, "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." In re Young, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

Applicant's arguments thus fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant's arguments also thus do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

If applicant believes that a telephone or in-person interview with applicant's attorney would help to clarify matters, the examiner invites the latter to telephone the examiner and set one up, as needed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 3 through 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Base claim 1, for example, recites the pressure drop across the inlet valve as being "at least about 10 bar", which is an

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open-ended range including an infinite pressure drop across the inlet valve and on which applicant is attempting to rely for patentability of the claims. However, the originally filed disclosure does not disclose any way the inventive system as being operable under conditions which would yield an infinite pressure drop across the inlet valve, for example. Thus, reciting such an open ended range in base claim 1 does not meet the written description requirement under 35 U.S.C. 112, first paragraph. See In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 and 3 through 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Whereas base claim 1 recites that the pressure drop across the inlet valve is "a least about 10 bar", what particular valve or system configuration, if any, is required in order to meet this functional requirement. Thus, the metes and bounds of protection sought by claim 1 and all claims depending therefrom are not clear.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States;–

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. As best can be understood in view of the indefiniteness of the claims, claims 1, 3, 4, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishizawa et al. (previously of record, filed March 1, 1995).

Nishizawa et al. [especially Figures 1 and 7] discloses a system essentially as claimed, including: a chamber or vessel 1 adapted to receive at least one semiconductor substrate 12; couplings or nozzles 4 and 5 for placing the chamber or vessel 1 in fluid communication with an inherent gas supply source for gases 8 and 9, which source reads broadly on the fluid reservoir as cited in claim 1 of the instant application; inlet valves 6 and 7 attached to the nozzles or couplings 4 and 5; and, a controller 18 [see Figure 1] for controlling inlet valves 6 and 7. Shroud 28 is disposed in the flow path of the fluid flowing from nozzles 4 and 5 into chamber or vessel 1 and thus reads broadly on the baffle as cited in claim 8. Little or no patentable weight is generally given to various functional language and intended use limitations in the apparatus claims. Since no particular structure is disclosed as being associated with the pressure drop range limitations in the claims of the instant application, it is assumed that any valve in an otherwise comparable system will meet the functional range limitations in the claims.

The reference thus reads on the claims.

9. Alternately for claims 1, 3, and 4, and as best can be understood in view of the indefiniteness of the claims, claims 1 and 3 through 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazama et al. (previously of record).

Kazama et al. discloses a system essentially as claimed, including: a chamber 3 adapted to receive at least one semiconductor substrate or wafer W; an inlet valve 29 attached to a coupling and to a fluid reservoir 30 (or alternately, an inlet valve 56 attached to a coupling and to a fluid reservoir 58, for example); an outlet valve 53 or 59; and, a controller or CPU 40 operatively connected to each of the previously cited inlet and outlet valves. Little or no patentable weight is generally given to various functional language and intended use limitations in the apparatus claims. Since no particular structure is disclosed as being associated with the pressure drop range limitations in the claims of the instant application, it is assumed that any valve in an otherwise comparable system will meet the functional range limitations in the claims.

The reference thus reads on the claims.

10. Alternately and as best can be understood in view of the indefiniteness of the claims, claims 1, 3, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Krueger (previously of record).

Krueger discloses a system essentially as claimed, including: a chamber 12 adapted to receive at least one semiconductor substrate or wafer 20; various couplings attached to inlet valves 78 or 42; a fluid reservoir 46; and, a controller 80 operatively connected to each of inlet valves 78 and 42. Little or no patentable weight is generally given to various functional language and intended use limitations in the apparatus claims. Since no particular structure is disclosed as being associated with the pressure drop range limitations in the claims of the instant application, it is assumed that any valve in an otherwise comparable system will meet the functional range limitations in the claims.

The reference thus reads on the claims.

11. Alternately and as best can be understood in view of the indefiniteness of the claims, claims 1, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sikes (previously of record).

Sikes discloses a system for cooling semiconductor processing devices essentially as claimed, including: a chamber 12 adapted to receive at least one semiconductor substrate or wafer 22; gas supply

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tanks 14, any one of which reads on the fluid reservoir as claimed; at least one inlet valve attached (directly or indirectly) to a coupling which are inherent to the gas control panel 18 and associated conduit structures; and, a controller 20 operatively connected to the gas control panel 18. Little or no patentable weight is generally given to various functional language and intended use limitations in the apparatus claims. Since no particular structure is disclosed as being associated with the pressure drop range limitations in the claims of the instant application, it is assumed that any valve in an otherwise comparable system will meet the functional range limitations in the claims.

The reference thus reads on the claims.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric, whose telephone number is (703) 308-3925.

While she works a flexible schedule that varies from day to day and from week to week, Examiner Ciric may generally be reached at the Office during the work week between the hours of 10 a.m. and 6 p.m. ET.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel, can be reached on (703) 308-1272.

The NEW central official fax phone number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

lvc

March 5, 2004


LJILJANA V. CIRIC
PRIMARY EXAMINER
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